RISKS ASSOCIATED WITH ACTIVE TRAVEL IN PARK-ADJACENT NEIGHBORHOODS IN LOS ANGELES, USA

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Background and Aims: Poor and minority neighborhoods have limited access to parks, open space and recreational programming. This lack of access is associated with reduced physical activity and with increased risk of obesity. The access may be even worse if the environments people must travel through to parks are unsafe. In this research, we investigated whether active transportation to parks was more dangerous as a result of increased risk of traffic crashes and higher air pollution exposure for persons living in socially disadvantaged neighborhoods.
Methods: The study was conducted in the Green Visions Plan area in Southern California, an area over 5.5 million acres (>22,000 km^2) spanning four municipalities in Los Angeles. A quarter-mile (~0.4 km) buffer distance to public parks was used to define park-adjacent neighborhoods. Socioeconomic and racial-ethnic characteristics in park-adjacent neighborhoods were estimated using a proportion algorithm by intersecting the corresponding year 2010 U.S. Census tract level statistics. The Southern California travel survey data were used to derive active mode split estimates and then used to impute to all park-adjacent neighborhoods. Data on traffic crashes were acquired from the Statewide Integrated Traffic Records System (SWITRS) for 1999 – 2008. The total number of traffic crashes within each park-adjacent neighborhood was summed. The socioeconomic and racial-ethnic characteristics were modeled against traffic crashes, traffic-related air pollution and their cumulative impacts.
Results: We identified that higher proportions of African Americans, Latinos, families in poverty, and areas of low education were significantly correlated to higher rates of active travel. Those disadvantaged groups also experienced greater air pollution, higher rates of traffic crashes and larger cumulative impacts.
Conclusions: Active transportation to parks is more dangerous for persons living in neighborhoods with high proportions of socially disadvantaged people. Traffic safety and air quality improvements in disadvantaged neighborhoods will enhance access to parks in neighborhoods where residents are at high risk.